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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,095

11/15/2006

Toshiyuki Tamai

SAE-040

4753

20374 7590 03/19/2009

KUBOVCIK & KUBOVCIK

SUITE 1105

1215 SOUTH CLARK STREET

ARLINGTON, VA 22202

EXAMINER

CHEUNG, WILLIAM K

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,095	<b>Applicant(s)</b> TAMAI ET AL.	
	<b>Examiner</b> WILLIAM K. CHEUNG	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>080306</u> .                                                  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. The instant application is a 371 of international application PCT/JP2004/016228, which claims priority based on Japanese patent application No. 2003-377424 filed November 6, 2003. Claims 1-7 are pending.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoichi et al. (EP 1 260 278 A2) in view of Poole et al. (US 4,945,003).

1. An ultraviolet-curing resin composition comprising  
(a) 5 to 35 parts by mass of a chlorinated polyolefin with a chlorine content of 15 to 40 mass %, (b) 15 to 60 parts by mass of an alicyclic hydrocarbon mono(meth)acrylate, and (c) 5 to 80 parts by mass of a polypropylene glycol di(meth)acrylate;  
and further containing, per 100 parts by mass of the total amount of components (a), (b) and (c), (d) 0 to 1100 parts by mass of an aliphatic hydrocarbon di(meth)acrylate and (e) 0 to 600 parts by mass of a polyfunctional monomer having 3 to 6 (meth)acryloyl groups in its molecule;  
and further containing, per 100 parts by mass of the total amount of components (b), (c), (d) and (e), (f) 1 to 15 parts by mass of a photoinitiator.

Yoichi et al. (abstract) disclose a coating method involving a UV-curable coating to form an under coating film comprising alicyclic hydrocarbon mono(meth)acrylate such as isobornyl (meth)acrylate. Yoichi et al. (page 4, 0021) clearly disclose an amount of 30 to 90 weight percent of alicyclic hydrocarbon mono(meth)acrylate to be used.

Regarding the claimed polypropylene glycol di(meth)acrylate, Yoichi et al. (page 5, 0032, line 1-3) clearly teach the use of polyol (such as polypropylene glycol) capped with (meth)acrylic acid. Yoichi et al. (page 5, 0032, line 5) also teach the use of di(meth)acrylate formed with 1,6-hexanediol. The amount of the polypropylene glycol di(meth)acrylate to be used in the disclosed invention is clearly taught in Yoichi et al. (page 6, 0046), Which teach an amount of 30 to 80 weight percent.

Regarding the claimed chlorinated polyolefins, Yoichi et al. (page 7, 0053) clearly teach the use of 0.05 to 10 weight percent of chlorinated polyolefins, which can be maleic anhydride grafted at a loading of 0.01 to 1 mol/L. Since the molecular weight of

Art Unit: 1796

maleic anhydride is about five times the molecular weight of an olefin unit such as ethylene or propylene, the examiner has a reasonable basis that the claimed amount of carboxylic acid content of claim 2 is inherently possessed in the chlorinated polyolefins of Yoichi et al.

Yoichi et al. (page 7, 0050) disclose the use of 2-15 weight percent of photoinitiators.

Regarding the claimed articles of claims 3-7, the recited "paint", "ink", "adhesive", "sealing agent", "primer" are merely different functional languages for the composition of claim 1, because the claims fails to disclose any ingredients that are unique to the intended applications or articles being claimed. Therefore, in view of the substantially identical composition disclosed in Yoichi et al. and as claimed, the examiner has a reasonable basis that the claimed "paint", "ink", "adhesive", "sealing agent", "primer" have adequately been met by Yoichi et al.

The difference between Yoichi et al. and the invention as claimed is that Yoichi et al. do not teach the chlorine content as claimed.

However, Poole et al. (abstract) teach a UV curable coating composition comprising polymerizable (meth)acrylates and maleic anhydride grafted chlorinated polyolefins with a chlorine content of about 5 to 25 weight percent. In view of substantially identical endeavors of developing UV curable coating composition comprising chlorinated polyolefins that have been grafted with maleic anhydride, it would have been obvious to one of ordinary skill in art to incorporate the chlorine content teachings of Poole et al. into Yoichi et al. to obtain the invention as claimed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM K. CHEUNG whose telephone number is (571)272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William K Cheung/  
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.  
Primary Examiner  
March 12, 2009